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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,250	01/11/2002	Seong Chun Kim	0630-1411P	6252

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EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,250

Applicant(s)

KIM, SEONG CHUN

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-9, drawn to a turbofan in Paper No. 4 is acknowledged. The traversal is on the ground(s) that the Office has failed to meet the burden of showing that the groups of claims are independent and distinct. Applicant has cited MPEP 802.01 and has argued that although the restriction requirement sets forth reasons why the inventions are distinct from one another, the burden of showing that the groupings are independent has not been met. Applicant has further cited MPEP 808.01 and 806.04 for the definition of independent inventions, and has argued that the groups set forth by the examiner cannot be considered "independent" since the application discloses relationship between the subject matter of the groups, and that the groupings are not wholly unrelated or independent. These arguments are not found persuasive because MPEP 802.01 clearly states that the law has long been established that dependent inventions may be properly divided if they are in fact, "distinct" inventions, even though dependent. MPEP 803 sets forth that restriction is proper when the claimed inventions are able to support separate patents and they are either independent or distinct. The restriction requirement established that the inventions of Groups I and II are distinct, each from the other because they are related as process of making and product made (MPEP 806.05(f)), and that the inventions are distinct because the product as claimed can be made by another and materially different process, such as CNC machining from a single solid workpiece. Because the restriction requirement established that the inventions of Groups I and II have acquired a separate status in the art as shown by their different classification, that the search required for Group II is not required for Group I, and that the inventions have acquired a separate

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status in the art because of their recognized divergent subject matter, as set forth in the guidelines set forth in MPEP 806.05(f), the inventions are distinct and restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claim 10 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.

Specification

The disclosure is objected to because it is replete with clerical and grammatical errors too numerous to mention in their entirety. The following are several examples of defects. The specification should be carefully proofread for additional defects. Appropriate correction is required.

On page 2, line 12, -- the -- should be inserted after "increase".

On page 2, line 12, -- the -- should be inserted after "of.

On page 4, line 5, "part" (first occurrence) should be changed to -- of the parts --.

On page 14, line 12, "16" should be changed to -- 161 --.

Examiner's Suggestion to Claim Language

The following is a suggestion to improve the clarity and precision of the claims:

In claim 5, line 1, "a" may be changed to -- the --.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee 6,679,682 (figures 7-9). Note the turbofan comprising a hub 32 coupled with an unnumbered rotational shaft of a driving motor, plural blades 40 installed at a circumference of the hub radially, and shroud 50 at an opposite side to the hub so as to be coupled with the plural blades, with the blades being placed between the shroud and the hub, with the hub, blades, and shroud being formed in one body, with the shroud comprising a first extension 54 protruding to extend from an unnumbered coupling part with a leading edge of each of the blades in an inward radial direction of the rotational shaft (see figure 8) and a second extension 52 extending straight from the first extension 54 in a direction of the rotational axis towards a side opposite to the hub 32, with the second extension 52 extending from an inward end of the first extension 54 so as to form an L-figure with the first extension, and a minimum inner diameter D1 of the shroud being equal to or longer than a maximum outer diameter D2 of the hub.

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The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 and 9 are rejected under 35 U.S.C. 103(a) as being obvious over Lee 6,679,682 in view of either (United Kingdom Patent 942,648 or Japanese Patent 54-72,501). Lee discloses a turbofan substantially as claimed as set forth above, including the shroud 50 comprising the first extension 54, the second extension 52, and a shroud body 56, but does not disclose that a surface which is coupled with the blades, of a portion at which the shroud body 56 and the first extension 54 are connected to each other is curved, in a concave manner.

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United Kingdom Patent 942,648 shows an impeller having an unnumbered first extension, an unnumbered second extension, and an unnumbered shroud body, with a surface which is coupled with the blades 2, of a portion at which the shroud body and the first extension are connected to each other being curved, in a concave manner, for the purpose of smoothly guiding flow to the impeller blades at their outlets. Japanese Patent 54-72,501 (figures 1-2) shows an impeller having an unnumbered first extension, an unnumbered second extension, and a shroud body 1a, with a surface which is coupled with the blades 1b, of a portion at which the shroud body and the first extension are connected to each other being curved, in a concave manner, for the purpose of smoothly guiding flow to the impeller blades at their outlets.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the turbofan of Lee such that a surface which is coupled with the blades, of a portion at which the shroud body and the first extension are connected to each other is curved, in a concave manner, as taught by either United Kingdom Patent 942,648 or Japanese Patent 54-72,501, for the purpose of smoothly guiding flow to the impeller blades at their outlets.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of

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invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim is cited to show a turbofan with a minimum inner diameter of a shroud being equal to or longer than a maximum outer diameter of a hub.

Allowable Subject Matter

Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (703)-308-2638. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (703) 308-1044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
March 12, 2004



Christopher Verdier
Primary Examiner
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